1. A capacitor comprising:

an essentially monolithic structure comprising at least one composite portion sintered with a ceramic dielectric portion, wherein the composite portion includes a ceramic and a conductive metal, the capacitor further characterized by a feature selected from the group consisting of:

(a) the composite portion comprises the conductive metal in an amount sufficient to render the composite portion conductive, wherein the composite portion provides an electrical lead for attaching the capacitor to a metallic surface trace on a printed circuit board; and

(b) a metallization area partially between the composite portion and the ceramic dielectric portion, and a conductive metal coating on faces of the composite portion not sintered to the ceramic dielectric portion, whereby the conductive metal coating provides an electrical lead for attaching the capacitor to a metallic surface trace on a printed circuit board.

2. The capacitor of claim 1 wherein the composite portion comprises glass sintered with the ceramic dielectric portion.

3. The capacitor of claim 1 characterized by feature (a) wherein the composite portion comprises a matrix of the ceramic, and particles of the conductive metal are dispersed in the matrix, and wherein the conductive metal particles comprise about 40-90% of the composite portion.

4. The capacitor of claim 1 characterized by feature (b) wherein the composite portion comprises a matrix of the ceramic, and particles of the conductive metal are dispersed in the matrix, and wherein the conductive metal particles comprise less than about 40% of the composite portion.

5. The capacitor of claim 1 characterized by feature (b) wherein the composite portion comprises a plurality of ceramic layers in alternating relation with a plurality of conductive metal layers.

6. The capacitor of claim 1 characterized by feature (a) and further comprising a buried metallization in the dielectric portion and having at least one conductive metal-filled via extending from the buried metallization to the composite portion.

7. The capacitor of claim 1 characterized by feature (b) and further comprising a buried metallization in the dielectric portion and having at least one conductive metal-filled via extending from the buried metallization to the metallization area.

8. The capacitor of claim 1, wherein the at least one composite portion includes a pair of composite portions sintered to opposing faces of the ceramic dielectric portion, and wherein feature (b) includes the metallization area partially between each composite portion and the respective opposing face of the ceramic dielectric portion.

9. The capacitor of claim 1, wherein the ceramic dielectric portion is horizontally disposed with the composite portion sintered to a bottom portion thereof, the composite portion adapted to be mounted onto a pc board, and the capacitor further comprising a metallization on a top portion of the ceramic dielectric portion, the metallization adapted to be wire bonded to a pc board.

10. A capacitor comprising:

an essentially monolithic structure comprising first and second composite end blocks each having an internal face and a plurality of external faces and a ceramic dielectric portion therebetween, the ceramic dielectric portion having first and second opposed substantially coplanar surfaces at least partially sintered to the internal face of the respective first and second composite end blocks, wherein the first and second composite end blocks each include a ceramic and a conductive metal, the capacitor further characterized by a feature selected from the group consisting of:

(a) the first and second composite end blocks each comprise the conductive metal in an amount sufficient to render the composite end blocks conductive, wherein the composite end blocks provide electrical leads for attaching the capacitor to a metallic surface trace on a printed circuit board; and

(b) first and second metallization areas on a portion of the respective first and second coplanar surfaces with the remaining portion being sintered to the respective internal faces of the first and second composite end blocks, and a conductive metal coating on the plurality of external faces of the first and second composite end blocks, whereby the conductive metal coating provides electrical leads for attaching the capacitor to a metallic surface trace on a printed circuit board.

11. The capacitor of claim 10 wherein the internal faces of the first and second composite end blocks comprise glass.

12. The capacitor of claim 10 characterized by feature (a) wherein the composite end blocks comprise a matrix of the ceramic, and particles of the conductive metal are dispersed in the matrix, and wherein the conductive metal particles comprise about 40-90% of the composite end blocks.

13. The capacitor of claim 10 characterized by feature (b) wherein the composite end blocks comprise a matrix of the ceramic, and particles of the conductive metal are dispersed in the matrix, and wherein the conductive metal particles comprise less than about 40% of the composite end blocks.

14. The capacitor of claim 10 characterized by feature (b) wherein the composite end blocks comprise a plurality of ceramic layers in alternating relation with a plurality of conductive metal layers.

15. The capacitor of claim 10 characterized by feature (a) and further comprising a pair of buried metallizations in the ceramic dielectric portion and having at least one conductive metal-filled via extending from each buried metallization to the respective first and second composite end blocks.

16. The capacitor of claim 10 characterized by feature (b) and further comprising a pair of buried metallizations in the ceramic dielectric portion and having at least one conductive metal-filled via extending from each buried metallization to the respective first and second metallization areas.

17. A capacitor comprising:

a ceramic dielectric layer having first and second opposed substantially coplanar surfaces;

at least one first metallization area on a first portion of the first surface of the ceramic dielectric layer and at least one second metallization area on a first portion of the second surface of the ceramic dielectric layer;

a first composite end block having an internal face and a plurality of external faces, the internal face in contacting relation with the at least one first metallization area and sintered to a second portion of the first surface of the ceramic dielectric layer, wherein the composite comprises a ceramic and a conductive metal in an amount less than about 40% of the composite; and

a first conductive metal coating on the external faces of the first composite end block, whereby the coated first composite end block is adapted to be mounted directly on a printed circuit board to provide an electrical connection between the first metallization area and a metallic surface trace on said printed circuit board.

18. The capacitor of claim 17 wherein the composite comprises a plurality of ceramic sheets in alternating relation with a plurality of conductive metal sheets.

19. The capacitor of claim 17 wherein the composite comprises a matrix of the ceramic, and particles of the conductive metal are dispersed in the matrix.

20. The capacitor of claim 17 wherein the composite comprises ceramic particles coated with conductive metal.

21. The capacitor of claim 17 further comprising at least one buried metallization in the ceramic dielectric layer intermediate the opposed coplanar surfaces, and having at least one metal-filled via extending from the buried metallization to one of the first and second metallization areas.

22. The capacitor of claim 17 further comprising:

a second composite end block having an internal face and a plurality of external faces, the internal face in contacting relation with the at least one second metallization area and sintered to a second portion of the second surface of the ceramic dielectric layer, and

a second conductive metal coating on the external faces of the second composite end block, whereby the coated second composite end block is adapted to be mounted directly on a printed circuit board to provide an electrical connection between the second metallization area and a metallic surface trace on said printed circuit board.

23. A surface mountable, monolithic capacitor comprising:

a center ceramic dielectric portion having opposed coplanar surfaces;

a pair of composite end portions comprising a ceramic and a conductive metal in an amount sufficient to render the composite conductive, each end portion having an internal face and a plurality of external faces, each internal face sintered to a respective opposed coplanar surface of the center ceramic dielectric portion, whereby the conductive end portions are adapted to serve as electrodes for the capacitor and to provide electrical leads for attaching the capacitor to metallic surface traces on a printed circuit board.

24. The capacitor of claim 23 wherein the internal faces of the composite end portions comprise glass.

25. The capacitor of claim 23 wherein the conductive metal comprises about 90% of the composite end portions.

26. The capacitor of claim 23 further comprising at least one buried metallization in the center ceramic dielectric portion intermediate the opposed coplanar surfaces, and having at least one metal-filled via extending from the buried metallization to one of the composite end portions.

27. A method of making an essentially monolithic capacitor comprising the steps of:

placing a green-state ceramic dielectric sheet on a first green-state composite sheet, the composite comprising a ceramic and conductive metal;

laminating the sheets together;

cutting the laminated sheets a plurality of times in a first direction and then a plurality of times in a second direction perpendicular to the first direction to form a plurality of chips comprising a green-state ceramic dielectric portion adjacent a green-state composite portion; and

firing the chips to sinter the ceramic in the ceramic dielectric portion to the ceramic in the composite portion.

28. The method of claim 27 further comprising, prior to laminating, placing a second green-state composite sheet on the green-state ceramic dielectric sheet, whereby after cutting, a plurality of chips are formed comprising a green-state ceramic dielectric portion between two green-state composite portions.

29. The method of claim 28 further comprising, prior to placing the green-state ceramic dielectric sheet, providing metallizations on each of opposing faces of the green-state ceramic dielectric sheet in spaced strips extending to opposed edges, and wherein the first direction of cutting is parallel to the strips and in the spaces therebetween.

30. The method of claim 29 further comprising, after firing the chips, electroplating the chips with a conductive metal whereby a conductive coating is formed over exposed surfaces of the composite portions by virtue of the conductive metal therein.

31. The method of claim 27 further comprising providing a metallization on the ceramic dielectric portion on a face opposing the composite portion.

32. The method of claim 27 further comprising forming the ceramic dielectric sheet with one or more buried electrodes therein and one or more metal filled vias extending from each buried electrode to a surface of the ceramic dielectric sheet.

33. The method of claim 27 wherein the first green-state composite sheet includes a glass-containing surface layer and the green-state ceramic dielectric sheet is placed on the glass-containing surface layer.

34. A method of making an essentially monolithic surface mountable capacitor comprising the steps of:

providing metallizations on each of opposing faces of a green-state ceramic dielectric sheet in spaced strips extending to opposed edges;

placing the green-state ceramic dielectric sheet with the metallizations on a first green-state composite sheet;

placing a second green-state composite sheet on the green-state ceramic dielectric sheet, wherein the composite sheets each comprise a ceramic and conductive metal in an amount insufficient to render the composite conductive;

laminating the sheets together;

cutting the laminated sheets a plurality of times in a first direction and then a plurality of times in a second direction perpendicular to the first direction wherein the first direction of cutting is parallel to the strips of metallization and in the spaces therebetween to form a plurality of chips comprising a green-state ceramic dielectric portion partially metallized on each of opposing surfaces, the opposing surfaces between and contacting two green-state composite portions;

firing the chips to sinter the ceramic in the ceramic dielectric portion to the ceramic in the composite portions; and

electroplating the chips with a conductive metal whereby a conductive coating is formed over exposed surfaces of the composite portions by virtue of the conductive metal therein.

35. The method of claim 34 further comprising forming the ceramic dielectric sheet with one or more buried electrodes therein and one or more metal filled vias extending from each buried electrode to a surface of the ceramic dielectric sheet.

36. A method of making a monolithic surface mountable capacitor comprising the steps of:

placing a green-state ceramic dielectric sheet on a first green-state composite sheet;

placing a second green-state composite sheet on the green-state ceramic dielectric sheet, wherein the composite sheets each comprise a ceramic and conductive metal in an amount sufficient to render the composite conductive;

laminating the sheets together;

cutting the laminated sheets a plurality of times in a first direction and then a plurality of times in a second direction perpendicular to the first direction to form a plurality of chips comprising a green-state ceramic dielectric portion between two green-state conductive composite portions;

firing the chips to sinter the ceramic in the ceramic dielectric portion to the ceramic in the conductive composite portions.

37. The method of claim 36 wherein the first and second green-state composite sheets each include a glass-containing surface layer such that, upon placement, the green-state ceramic dielectric sheet is between the glass-containing surface layers.